

SEQUENCE LISTING<sup>1</sup>

<110> Visible Genetics Inc.  
Shipman, Robert

<120> Method and Kit for the Characterization of  
Antibiotic-Resistance Mutations in Mycobacterium  
tuberculosis

<130> VGEN.P-055-WO

<140>

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<150> 60/111,794

<151> 1998-12-11

<160> 50

<170> PatentIn Ver. 2.1

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<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> rpoB-F amplification primer

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<212> DNA

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<220>

<223> rpoB-R amplification primer

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20

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<220>  
<223> rpoB-5s sequencing primer

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<212> DNA  
<213> Mycobacterium tuberculosis

<220>  
<223> rpoB-3s sequencing primer

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<213> Mycobacterium tuberculosis

<220>  
<223> rpoB (rifampin resistance)

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cccaggacgt ggaggcgatc acaccgcaga cgttgatcaa catccggccg gtggtcgccg 180  
cgatcaagga gttcttcggc accagccagc tgagccaatt catggaccag aacaaccgc 240  
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agcgtgccgg gctggaggtc cgcgacgtgc acccgtcgca ctacggccgg atgtgcccga 360  
tcgaaacccc tgaggggccc aacatcggtc tgatcggtc gctgtcggtg tacgcgcggg 420  
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<212> DNA  
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<223> katG-F amplification primer

<400> 6  
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<210> 7  
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<212> DNA  
<213> Mycobacterium tuberculosis

<220>  
<223> katG-R amplification primer

<400> 7  
ggtgtccag ccagcgacgc 20

<210> 8  
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<220>  
<223> katG-5s sequencing primer

<400> 8  
atggggctga tctacgtgaa 20

<210> 9  
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<213> Mycobacterium tuberculosis

<220>  
<223> katG-3s sequencing primer

<400> 9  
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<210> 10  
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<212> DNA  
<213> Mycobacterium tuberculosis

<220>  
<223> katG (isoniazid resistance)

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ggcggtcgac attcgcgaga cgtttcggcg catggccatg aacgacgtcg aaacagcggc 180  
gctgatcgtc ggcggtcaca ctttcggtaa gacctatggc gccggcccg ccgatctggt 240  
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ggccgacgag ttcgccaagg cctggtacaa gctgatccac cgagacatgg gtcccgttgc 660

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<220>  
<223> PR-R amplification primer

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<223> PR-5s sequencing primer

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<213> Mycobacterium tuberculosis

<220>  
<223> PR-3s sequencing primer

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<210> 15  
<211> 420  
<212> DNA  
<213> Mycobacterium tuberculosis

<220>  
<223> oxyR-ahpC intergenic region (PR)

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cgcgaagccc ggccacggcc ggctagcacc tcttggcggc gatgccgata aatatggtgt 180  
gatatatcac ctttgctga cagcgacttc acggcacgat ggaatgtcgc aaccaaagc 240  
attgtccgct ttgatgatga ggagagtcac gccactgcta accattggcg atcaattccc 300  
cgctaccag ctcaccgctc tcacggcggg tgacctgtcc aaggctgacg ccaagcagcc 360  
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<223> fabG-F amplification primer

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20

<210> 17

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> fabG-R amplification primer

<400> 17

atcccccggt ttctccggt

20

<210> 18

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> fabG-5s sequencing primer

<400> 18

cctcgctgcc cagaaaggga

20

<210> 19

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> fabG-3s sequencing primer

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20

<210> 20  
<211> 360  
<212> DNA  
<213> Mycobacterium tuberculosis

<220>  
<223> fabG (isoniazid resistance)

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agcgtaaccc cagtgcgaaa gttcccgcg gaaatcgag ccacgttacg ctgtggaca 180  
taccgatttc ggcccggcgc cggcgagacg ataggtgtc ggggtgactg ccacagccac 240  
tgaagggggc aaacccccat tcgtatcccg ttcagtcctg gttaccggag gaaaccgggg 300  
gatcgggctg gcgatcgac agcggctggc tgccgacggc cacaaggtgg ccgtcaccca 360

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<220>  
<223> s12-F amplification primer

<400> 21  
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<210> 22  
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<212> DNA  
<213> Mycobacterium tuberculosis

<220>  
<223> s12-R amplification primer

<400> 22  
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<210> 23  
<211> 20  
<212> DNA  
<213> Mycobacterium tuberculosis

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&lt;223&gt; s12-5s sequencing primer

&lt;400&gt; 23

cggtagatgc caaccatcca

20

&lt;210&gt; 24

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; s12-3s sequencing primer

&lt;400&gt; 24

gcatcagccc ttctccttct

20

&lt;210&gt; 25

&lt;211&gt; 420

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; rpsL/s12 (streptomycin resistance)

&lt;400&gt; 25

cggtagatgc caaccatcca gcagctggtc cgcaagggtc gtcgggacaa gatcagtaag 60  
gtcaagaccg cggctctgaa gggcagcccg cagcgtcgtg gtgtatgcac ccgcgtgtac 120  
accaccactc cgaagaagcc gaactcggcg ctctggaagg ttgccgcgt gaagtgacg 180  
agtcaggctg aggtcacggc gtacattccc ggcgagggcc acaacctgca ggagcactcg 240  
atggtgctgg tgcgcggcgg ccgggtgaag gacctgcctg gtgtgcgcta caagatcatc 300  
cgcggttcgc tggatacgca ggggtgtaag aaccgcaaac aggcacgcag ccgttacggc 360  
gctaagaagg agaagggtg atgccacgca aggggcccgc gcccaagcgt ccgttggtca 420

&lt;210&gt; 26

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; 16S-F amplification primer



&lt;400&gt; 26

ggtgatctgc cctgcacttc g

21

&lt;210&gt; 27

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; 16S-R amplification primer

&lt;400&gt; 27

cgtcacccca ccaacaagct g

21

&lt;210&gt; 28

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; 16S-5s sequencing primer

&lt;400&gt; 28

ggtgatctgc cctgcacttc g

21

&lt;210&gt; 29

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; 16S-3s sequencing primer

&lt;400&gt; 29

cgtcacccca ccaacaagct g

21

&lt;210&gt; 30

&lt;211&gt; 147

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; 16S/rrs (streptomycin resistance)

&lt;400&gt; 30

cgtgggtgat ctgccctgca cttcgggata agcctgggaa actgggtcta ataccggata 60  
ggaccacggg atgcatgtct tgtgggtggaa agcgctttag cgggtgtgga tgagcccgcg 120  
gcctatcagc ttgttggtgg ggtgacg 147

&lt;210&gt; 31

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; embB-F amplification primer

&lt;400&gt; 31

cggcaagctg gcgcaccttc a

21

&lt;210&gt; 32

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; embB-R amplification primer

&lt;400&gt; 32

agccagcaca ctgcccggc g

21

&lt;210&gt; 33

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; embB-5s sequencing primer

&lt;400&gt; 33

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21

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<220>  
<223> embB-3s sequencing primer

<400> 34  
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21

<210> 35  
<211> 300  
<212> DNA  
<213> Mycobacterium tuberculosis

<220>  
<223> embB (ethambutol resistance)

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cctgggcatg gcccgagtgc ccgaccacgc cggctacatg tccaactatt tccgctggtt 180  
cggcagcccg gaggatccct tcggctggta ttacaacctg ctggcgctga tgacctatgt 240  
cagcgacgcc agtctgtgga tgcgcctgcc agacctggcc gccgggctag tgtgctggct 300

<210> 36  
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<220>  
<223> pncA-F amplification primer

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atgcgggcgt tgatcatcgt

20

<210> 37  
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<212> DNA  
<213> Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; pncA-F amplification primer

&lt;400&gt; 37

tcaggagctg caaaccaact

20

&lt;210&gt; 38

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; pncA-5s sequencing primer

&lt;400&gt; 38

atgcgggcgt tgatcatcgt

20

&lt;210&gt; 39

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; pncA-3s sequencing primer

&lt;400&gt; 39

tcaggagctg caaaccaact

20

&lt;210&gt; 40

&lt;211&gt; 561

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; pncA (pyrazinamide resistance)

&lt;400&gt; 40

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gtaaccgggtg gcgccgcgct ggcccgcgcc atcagcgact acctggccga agcggcggac 120  
taccatcacg tcgtggcaac caaggacttc cacatcgacc cgggtgacca cttctccggc 180  
acaccggact attctcgtc gtggccaccg cattgcgtca gcggtactcc cggcgcggac 240  
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ggagcgtaca gcggcttcga aggagtcgac gagaacggca cgccactgct gaattggctg 360  
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cagacggccg aggacgcggt acgcaatggc ttggccacca ggggtgctggt ggacctgaca 480  
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<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA-F amplification primer

<400> 41

cagctacatc gactatgcga

20

<210> 42

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA-R amplification primer

<400> 42

gggcttcggt gtacctcatc

20

<210> 43

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA-5s sequencing primer

<400> 43

cagctacatc gactatgcga

20

<210> 44

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA-3s sequencing primer

<400> 44

gggcttcggt gtacctcatc

20

<210> 45

<211> 420

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA (fluoroquinilone/ciprofloxacin resistance)

<400> 45

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tcgccgggtg ctctatgcaa tgttcgattc cggttcgcgc ccggaccgca gccacgcca 180  
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ccagggcaac ttcggctcgc caggcaatga cccaccggcg gcgatgaggt acaccgaagc 360  
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<210> 46

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 23S-F amplification primer

<400> 46

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20

<210> 47

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

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&lt;223&gt; 23S-R amplification primer

&lt;400&gt; 47

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20

&lt;210&gt; 48

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; 23S-5s sequencing primer

&lt;400&gt; 48

cgaaattcct tgtcgggtaa

20

&lt;210&gt; 49

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; 23S-3s sequencing primer

&lt;400&gt; 49

gtattcaac aacgactcca

20

&lt;210&gt; 50

&lt;211&gt; 300

&lt;212&gt; DNA

&lt;213&gt; Mycobacterium tuberculosis

&lt;220&gt;

&lt;223&gt; 23S (macrolide/azithromycin resistance)

&lt;400&gt; 50

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taagttccga cctgcacgaa tggcgtaacg acttccaac tgtctcaacc atagactcgg 120  
cgaaattgca ctacgagtaa agatgctcgt tacgcgcggc aggacgaaaa gaccccgga 180  
ccttactac aacttggtat tgggttcgg tacggttgt gtaggatagg tgggagactt 240  
tgaagcacag acgccagtti gtgtggagtc gttgttgaat taccactctg atcgattgg 300